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(S) NATIONAL RECONNAISSANCE OFFICE

WASHINGTON, D.C.

OFFICE OF THE DIRECTOR

March 11, 1981

MEMORANDUM FOR THE CHIEF OF STAFF, OFFICE OF THE VICE PRESIDENT
(ADMIRAL DANIEL J. MURPHY, USN RET.)

SUBJECT: National Reconnaissance Program's Planned Use of the Space Shuttle

Per your request, the attached summary of the National Reconnaissance Program's planned use of and dependence on the NASA Space Shuttle is forwarded for Vice President Bush's review prior to his trip to Cape Canaveral.

If I or my Staff can be of further assistance to you or Vice President Bush, please do not hesitate to call.

ROBERT J. HERMANN

1 Attachment
Summary of NRP Utilization
of the Shuttle

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NATIONAL RECONNAISSANCE PROGRAM
UTILIZATION OF THE SHUTTLE

SUMMARY

For the past few years, the National Reconnaissance Office has been:

- Transitioning reconnaissance satellites to the Shuttle.

- In most cases, planning the transition to the Shuttle to coincide with incorporating major required changes to the satellite systems.

- With some exceptions, we have maintained a backup expendable launch vehicle capability by:

  -- Maintaining spacecraft designs compatible with the Shuttle and expendable boosters.

  -- Insuring booster procurements to support required launch dates.

  -- Maintaining launch facilities at both the East and West Coast.

As the Shuttle has slipped, we have been forced to decide on a case-by-case basis whether or not to maintain a backup capability. At the present time, [redacted] no irreversible commitment 25X1
have been made to the Shuttle. However, decisions will be required this summer if irreversible commitments are not to be made for [redacted] 25X1
[redacted] We have several more months before we reach this position 25X1

The NRO is currently awaiting the outcome of the Shuttle's First Manned Orbiter Flight (FMOF) next month. The results of this flight will be a significant factor in a planned reassessment of the total commitment to the Shuttle. This will include revisiting the present plan to phase out all expendable launch vehicles and launch capability by 1985.

Attached to this summary is a more detailed NRP Shuttle Utilization Plan.

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NATIONAL RECONNAISSANCE PROGRAM
UTILIZATION OF THE SHUTTLE

I. INTRODUCTION

The National Reconnaissance Office (NRO) is a separate DOD agency with responsibility for developing, building and operating all United States satellite reconnaissance systems. There are currently intelligence satellites, Currently, prior to the Space Shuttle, these systems are launched into orbit on expendable launch vehicles (ELVs). The expendable boosters used today are primarily variations of the of the current satellite systems will be phased out between now and the end of ; the remaining will be launched by the Space Shuttle. This transition will occur commencing in the summer of and will be complete by the time the expendable launch capability will be phased out, under current planning, by the end of 1985. 25X1

From the inception of the Space Shuttle program in 1971 through early 1978, the NRP had been structured to transition to the Shuttle on a very conservative basis. This pre-1978 policy could simply be stated as follows: "The NRO will not commit any reconnaissance satellite program to final design and manufacturing which is dependent on a Space Shuttle capability until said capability has been demonstrated on orbit." This conservative policy had dictated that most NRP programs would transition to the Shuttle in the 1984-1985 time frame and that even then, in many cases, would not be fully optimized to take advantage of the unique Shuttle capabilities. Due to many criticisms from both Congress and from within the Administration, this conservative policy was revised. This revised policy permitted the satellite designers to take full advantage of additional volume and payload weight capabilities offered by the Space Shuttle when compared to the expendable launch vehicles currently used. The new policy put into effect in mid-1978 resulted in being optimized to the Shuttle with planned first launches in late and early . At that time, the Shuttle's Initial Operating Capability (IOC) was programmed for August 1980 providing years of scheduled margin, which at the time seemed more than adequate. Since that time, two events have occurred which have significantly reduced the margin and raised our concern. First, the Shuttle IOC has slipped from August 1980 to September 1982 and secondly, the Congress and the Administration agreed to accelerate the planned launch of Consequently, what was initially better than a margin has been reduced to approximately 25X1

Currently, all reconnaissance satellite programs will be dependent on the Shuttle, to varying degrees, by at the latest 1985 when the current expendable launch capability is planned to be phased out. Over the last several months there has been considerable discussion and recommendations to the effect that critical Department of Defense and NRP missions should not be totally dependent on the Space Shuttle as a means of achieving orbit. It is our understanding, and we certainly support, a reassessment of the total commitment to the Space Shuttle depending to some extent on the success of the initial Shuttle flight currently scheduled for next month. While we do not feel that the success of the first Shuttle flight will alleviate all of the concerns pertaining to this issue, it will of course be a major factor in the deliberations.

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Other uses of the Shuttle planned by the NRO includes checkout on orbit, development of satellite structures packaging to take full advantage of Shuttle payload bay volume, and use of astronaut extravehicular activity to assist in satellite deployment.

The following is a brief description of each NRO satellite system and planned utilization of the Shuttle.

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